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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Application No.** : 10/644,135  
**Filed** : 08/20/2003  
**Confirmation No.** : 5329  
**For** : Electric Fluid Servo Valve and Method of  
Making Same  
**Inventor(s)** : Greg E. Ford, Harold L. Bowman  
**Art Unit** : 3753  
**Examiner** : John C. Fox  
**PDS No.** : 02-ASD-334 (EM)

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6/5/08  
Teresa Bonsall  
Date  
Teresa Bonsall

SUPPLEMENT TO APPEAL BRIEF

Sir:

Responsive to the Final Office Action dated September 6, 2007 and the  
Notification of Non-Compliant Appeal Brief dated May 9, 2008, Appellant responds as  
follows.

In accordance with the Examiner's instructions in the Notification of Non-  
Compliant Appeal Brief, Appellant has provided below only the sections that the  
Examiner found defective.

**III. STATUS OF CLAIMS ON APPEAL**

1. Rejected.
2. Rejected.

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3. Rejected.
4. Rejected.
5. Rejected.
6. Rejected.
7. Rejected.
8. Rejected.
9. Rejected.
10. Rejected.
11. Rejected.
12. Rejected.
13. Rejected.
14. Rejected.
15. Rejected.
16. Rejected.
17. Rejected.
18. Rejected.
19. Cancelled.
20. Rejected.

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**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claims 1-9 are anticipated under 35 U.S.C. § 102(b) by DE 198 39 843 to Hilberer ("Hilberer"), which corresponds to U.S. Patent No. 6,817,247.
- B. Whether claims 10-14 are anticipated under 35 U.S.C. § 102(b) to Hilberer ("Hilberer").
- C. Whether claims 15-18 and 20 are anticipated under 35 U.S.C. § 102(b) to Hilberer ("Hilberer").

**VII. ARGUMENTS**

In the Final Office Action, Claims 1-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by DE 198 39 843 to Hilberer ("Hilberer"), which corresponds to U.S. Patent No. 6,817,247. Claim 19 was cancelled without prejudice, rendering the rejection of claim 19 moot. Appellant respectfully traverses the rejection of remaining pending claims 1-18 and 20.

**A. Claims 1-9 are patentable over Hilberer**

The Examiner stated that Applicant's arguments were not persuasive because (1) the valve block 4 in Hilberer meets the recitation of the claimed valve body and (2) it is inherent that the sensor mechanism must be exposed to fluid to register its pressure. In the Advisory Action, the Examiner also noted that the pressure sensors in both Hilberer and the claimed invention are remote from the solenoid valves. Appellant respectfully disagrees.

The valve block 4 in Hilberer does not disclose or suggest the solenoid valve body recited in independent claim 1. "During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification.

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...The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach." MPEP § 2111. Expanding the claimed valve block to encompass a manifold, such as valve body 4 in Hilberer, stretches the term "valve body" beyond its broadest reasonable meaning. One of ordinary skill in the art would not have considered a manifold the same thing as a solenoid valve body because the solenoid valve 12 itself has its own body and because the manifold 4 is a separate and distinct component from the solenoid valve 12. In other words, one of ordinary skill in the art would have interpreted the term "valve body" to simply mean a body of the valve, not an entire manifold in which the valve resides. Thus, Hilberer fails to disclose the claimed valve body.

Moreover, Hilberer fails to show an assembly where the pressure sensing port of a valve body is aligned with the sensing aperture of the circuit board, which is in turn aligned with the pressure sensor. As noted in Appellant's previous responses, Figure 1 of Hilberer shows that the pressure sensors 8 are located remotely from the solenoid valves 12, making it impossible for the circuit board 17 and pressure sensors 8 to be arranged so that the pressure sensing port of the valve body is aligned with the sensing aperture of the circuit board. In the Advisory Action, the Examiner noted that it was difficult to understand the point of Appellant's argument that Hilberer has pressure sensors that are arranged remotely from the solenoid valves. Appellant notes that the term "aligned," as understood in the art, means "arranged in a line." As can be seen in Figure 1 of Hilberer, the remote location of the pressure sensors 8 with respect to the solenoid valves 18 and their side-by-side orientation does not show or teach arranging the sensors in a line with the valves.

Thus, nothing in Hilberer discloses or suggests a circuit board carrying portion of a pressure sensor that is aligned with a pressure sensing port in a valve body like the claimed invention.

The Examiner asserted that "it is inherent that the sensors include an aperture in that the sensor mechanism must be exposed to the fluid in order to register its pressure" (p. 3). However, this alone does not disclose the claimed invention because "[i]n relying

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upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." MPEP § 2112. The claimed alignment between the sensing aperture on the circuit board and the pressure sensing port on the pressure sensor does not necessarily flow from the limited teachings of Hilberer because, as noted in the previous response, the pressure sensors 8 in Hilberer do not even measure the pressure at the valves 12. Instead, the sensors 8 measure the fluid pressure in the pressure medium outlet bore 17, which is coupled to a regulating unit 11.

Even though it is true that a sensor must be exposed to fluid to measure pressure, the Examiner has not explained how sensing the pressure of a pressure medium outlet bore 17 in a manifold 4 (as shown in Hilberer) necessarily suggests aligning the pressure sensor with a pressure sensing port on a valve body and a sensing aperture on a circuit board so that the sensor senses an outlet pressure of a solenoid valve like the claimed invention. Hilberer's pressure sensors 8 are disposed remotely from the solenoid valves 12 and do not measure valve outlet pressure like the claimed invention. The Examiner has not explained how such an indirect route between the sensors 8 and the valves 12 in Hilberer necessarily suggests the claimed aligned structure.

For the reasons explained above, the Examiner's final rejection of claims 1-9 is improper and should be withdrawn.

**B. Claims 10-14 are patentable over Hilberer**

Claims 10-14 are directed to a method for making a valve assembly having a valve body with a pressure sensing port that is aligned with a pressure sensor and a pressure sensing aperture on a circuit board. As noted above, Hilberer does not disclose the claimed valve body or a pressure sensor, pressure sensing aperture on a circuit board, and pressure sensing port on the valve body that are aligned with each other. Thus, nothing in Hilberer discloses the steps of providing such a valve body or

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disposing the circuit board, pressure sensor, pressure sensing aperture, and pressure sensing port in the claimed manner. The final rejection of claims 10-14 is therefore improper and should be withdrawn.

C. Claims 15-18 and 20 are patentable over Hilberer

Like claims 1-9, claims 15-18 and 20 recite a valve assembly with a valve body having a pressure sensing port that is aligned with a sensing aperture on a circuit board. As explained above, Hilberer fails to disclose the claimed valve body because one of ordinary skill in the art would not have considered the manifold 4 in Hilberer the same as the claimed valve body. Furthermore, as explained above, the solenoid valve in Hilberer is located remotely from the pressure sensor and is therefore not aligned with the pressure sensor or any sensing aperture in a circuit board. As can be seen in Figure 1 of Hilberer, the side-by-side arrangement of the valves with respect to the sensors clearly precludes any aligned arrangement between the pressure sensing port in a valve body and a sensing aperture in a circuit board like the claimed invention. The final rejection of claims 15-18 and 20 is therefore improper and should be withdrawn.

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Accordingly, it is requested that the Board reverse the Examiner's rejection and allow the claims to be issued.

Respectfully submitted,



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